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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,299	04/23/2001	Kai Y. Eng	205/1	4383

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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/840,299

Applicant(s)

ENG ET AL.

Examiner

Phuongchau Ba Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01-29-02.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3-5, 10-12, 15-22, 25, 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 is vague and indefinite because it is not clear what is meant by "near immediate rerouting". Claims 16-22 and 27 are rejected in view of their dependencies on claim 15.

Claim 25 recites the limitation "the packet switching means, routing means and queuing means" in line 2. There is insufficient antecedent basis for this limitation in the claim as if claim 25 is selected for depending on claims 9-12.

Claims 3-5, 10-12, 16-17 are vague and indefinite because it is not clear what is meant by "where the sum of the priority weights over all of the classes equals 1".

Claims 4-5 recites the limitation "each subclass " in lines 1 & 3. Claims 25-27 recite the limitation "the flow of packets & the line rate" in line 3. Also, claim 25 recites

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"the node" in line 3 as if selected to be depended on claim 2 or 9. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-18, 20, 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Oba (6,262,986).

Regarding claims 1, 15, 23:

Oba (6,262,986) discloses a packet engine (fig.10) for use in a node in a data network, comprising:

a packet switch (102, fig.10);

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a forwarding/routing engine (16-fig.1 of 11-fig.10); and

a queuing processor (15, fig.1 of 11-fig.10);

where the queuing processor assigns individual packets to a flow queue (12, fig.1) by parsing a header appended by the forwarding/routing engine {col.5, lines 1-6, 19-22}.

Regarding claims 8, 22:

Oba (6,262,986) discloses a packet engine (fig.10) for use in a node in a data network, comprising:

a packet switch (102, fig.10);

a forwarding engine (16-fig.1 of 11-fig.10); and

a queuing processor(15, fig.1 of 11-fig.10), where the queuing processor assigns individual packets to a flow queue (12, fig.1) by parsing a header appended by the forwarding engine {col.5, lines 1-6, 19-22}, and where said header is determined by reading user defined sets of bits in each packet {col.1, lines 40-55}.

Regarding claims 25-27:

Oba does not explicitly where the functions of the packet switching means, routing means and queuing means do not impede the flow of packets through the node at the line rate. However, in the same field of endeavor, Oba discloses that the packet are forwarding accordance to the assigned weights of bandwidths that are setup for the VC connections corresponding to packet queues {col.5, lines 49-56; col.6, lines 3-6, 38-

45} thus the functions of the packet switching means, routing means and queuing means do not impede the flow of packets through the node at the line rate. Therefore, it would have been obvious to an artisan to include where the functions of the packet switching means, routing means and queuing means do not impede the flow of packets through the node at the line rate with the motivation being to prevent the packets of the group of connections with a large weight value from being always favored in a short time scale, and therefore it is possible to provide small delay jitters.

Regarding claims 2, 9:

Oba further discloses where flow queues are assigned to a plurality of subclasses, and each subclass is assigned to a plurality of classes {col.5, lines 27-33}.

Regarding claims 3, 10, 16:

Oba further discloses where the queuing processor services the queues in each class with a different priority weight, where the sum of the priority weights over all of the classes equals 1 {col.5, lines 49-56; col.6, lines 3-6, 38-45}.

Regarding claims 4, 11, 17:

Oba further discloses where the queuing processor services the queues in each subclass with a different priority weight, where the sum of the priority weights over all of the subclasses equals 1 {col.5, lines 49-56; col.6, lines 3-6, 38-45}.

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Regarding claim 5 and 12:

Oba further discloses where the queuing processor services the queues in each subclass with a different priority weight, where the sum of the priority weights over all of the subclasses equals 1 {col.5, lines 49-56; col.6, lines 3-6, 38-45}.

Regarding claims 6, 13, 18:

Oba further discloses where the queues are serviced in a weighted round robin manner {col.2, lines 8-10}.

Regarding claims 7, 14, 20:

Oba further discloses where the round robin manner defines unit quantities of data or unit quantities of time, and allocates more units to the higher priority weights according to a user defined algorithm {col.2, lines 8-12}.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oba (6,262,986) in view of Veres (6,614,790).

Regarding claim 24:

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Oba does not explicitly disclose a data network comprised of multiple nodes, each comprising the packet engine of any of claims 1, 8 or 23, or implementing the method of claim 15. However, in the same field of endeavor, Veres (6,614,790) discloses a data network comprising a multiple nodes each comprising the packet engine (figs.3-4). Therefore, it would have been obvious to an artisan to apply Veres's teaching to Oba's system with the motivation being to provide a service architecture having a simple and scalable way to guarantee different levels of quality of service in an integrated services packet-switched network.

Allowable Subject Matter


8. Claims 19-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 703-305-0093. The examiner can normally be reached on Monday-Friday from 10:00 a.m. to 2:00 p.m..


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 703-308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Phuongchau Ba Nguyen
Examiner
Art Unit 2665

**DUCHO
PRIMARY EXAMINER**


8-20-04